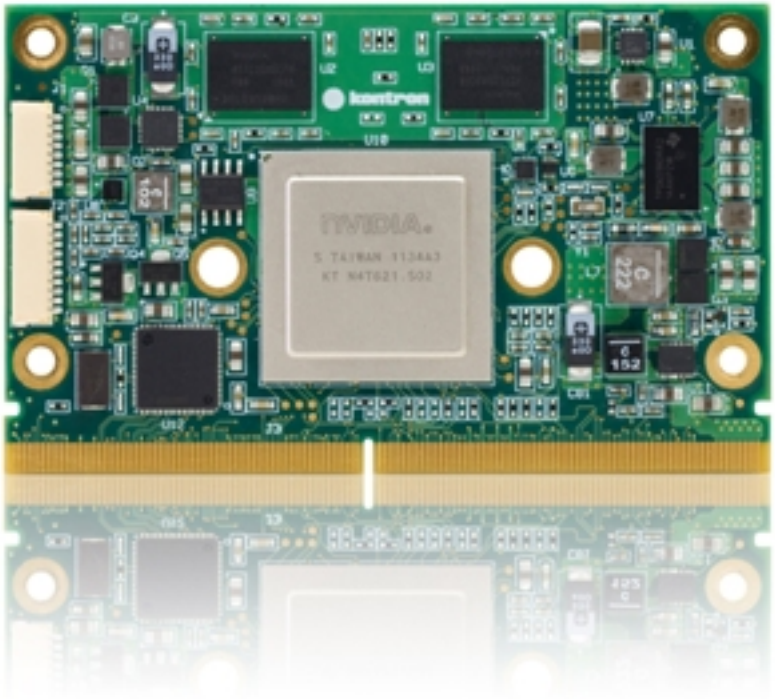
ARM-Based Ultra Low Power Module



Kontron today launched its first ultra low power, low profile ARM-based Computer-on-Module specifically designed to extend the proven and scalable Computer-on-Modules-based usage model to new modules with ARM® and SoC processors. The new Kontron Computer-on-Module, designated the Kontron ULP-COM-sAT30, offers a low profile solution that measures 82mm x 50mm and integrates NVIDIA® Tegra® 3 Quad Core ARM 1.2 GHz technology. The Kontron ULP-COM-sAT30 delivers an advanced, rugged and scalable building block for industrial tablet and imaging-centric applications where power consumption must be extremely low such as for those in the POS/POI, infotainment, digital signage, security/surveillance, medical and military markets. The combination of the low power NVIDIA® Tegra® 3 ARM processor and ULP-COM's optimized ARM/SoC pin-out definition enables designers to build fanless, passively cooled systems that dramatically reduce power consumption and costs of deployed systems.

The Kontron ULP-COM-sAT30 is based on the new module standard ULP-COM (Ultra Low Power Computer-on-Module). The ULP-COM specification has been submitted to the new Standardization Group for Embedded Technologies (SGET), and is expected to be officially released and available through SGET shortly. Kontron led the development of the new ULP-COM standard, which has received global support from the embedded community.

The Kontron ULP-COM-sAT30 uses a 314-pin connector (MXM 3.0) which enables an extremely low profile solution with board-to-board separation as low as 1.5 mm and

an overall height as low as 5.7 mm. This connection method contributes to robust and cost-effective designs that have an extremely thin construction height. Kontron's new ULP-COM-sAT30 also offers superior, high-end graphics support with dedicated interfaces for dual displays with HD video decode including MPEG2, HD video encode, ultra low-power NVIDIA® GeForce® GPU with dual display controllers, and 2D and 3D acceleration. In addition, flexible display support is provided for parallel LCD 18 / 24 bit, LVDS single channel 18 bit / 24 bit (18 bit compatible), as well as dual channel support for 24 bit LVDS (carrier board xmitter) and HDMI. Plus, Kontron's new ARM-based module delivers camera support via its 2x (dual lane) CSI-2 camera ports.

"The Kontron ULP-COM-sAT30 brings a robust solution that solves many design issues. It reduces power costs and provides flexible display options and high-end graphics demanded by OEMs and end-users alike – all in a standardized form factor geared towards low-profile, low-power systems," said Kevin Rhoads, Vice President, Embedded Products Business Unit, Kontron. "It is an ideal building block for mobile and fixed low-power usage model applications that need to operate in harsh environments and require high-end graphics, flexible display and camera support."

To further assist customers in application development and evaluation, Kontron is also announcing the availability of its ULP-COM Evaluation Carrier board. This multi-purpose carrier board is engineered specifically to enable designers to easily evaluate the comprehensive feature set of the ULP-COM Computer-on-Module. Additionally, it allows end-users to test and evaluate both hardware and software functionality in their particular application. Because many ARM-based solutions support a variety of interfaces, the ULP-COM Evaluation Carrier board also supports this diverse range of interfaces as well as solid state mass storage options. Furthermore, this versatile board supports display and camera interfaces along with an accelerometer for enhanced design flexibility.

In addition, Kontron is offering a pre-validated evaluation platform with its ULP-COM Computer-on-Modules. The reference platform includes all the evaluation resources OEMs require to start development immediately including the Kontron Computer-on-Module ULP-COM-sAT30, the ULP-COM Evaluation Carrier board, pre-loaded Linux O/S and a 10.6inch 1280x768 display that are mounted together on a platform for lab bench use.

Samples of the Kontron Computer-on-Module ULP-COM-sAT30 are available now, and series production will start in Q4 2012.

Kontron
www.kontron.com [1]

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[1] http://www.kontron.com